

**Your Pump and Valve  
Wear & Acid Protection Specialist  
“Ziroflex Coating”**



**STANFRA**  
ABRASIVE SOLUTIONS

**PROFILE**



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# SCOPE OF Business

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Stanfra Abrasive Solutions was registered in 2008. The company's main area of activity is the reconditioning of equipment used in the mining and paper industry and includes pump shafts, impellers, sleeves, bearing housings, volute casings, rear cover plates and pump helicals.

The company specialise in Zirolflex® Coating, Zirolflex® TR coating for acid protection and Epoxy Repairs (Belzona & Thortex Ceramic). Zirolflex® Coating applying to valve and pump components that have subjected to the most aggressive of applications, benefits from a surface hardness of 65-70 Rockwell C / 900 Vickers compared to 32 Rockwell C to 316 stainless steel. The Zirolflex® process results in the following properties:

Lower co-efficient of friction and resistance to the wear mechanisms of abrasion, adhesion and erosion. The Zirolflex® process ensures that the lifespan of these parts will outlast the original by TWO to FOUR times. A number of mining houses have applied the process to new components such as ball / plug valves, impellers, shafts and volute casings. This has extended the life of these parts way beyond the their normal maintenance intervals.

Epoxy repairs (Belzona & Thortex Ceramic) on pumps / multistage pump casings / general repairs on related rotating equipment, Cosmetic repairs and Epoxy linings, HVOF(High Velocity) Thermal Spray - 420 Stainless Steel, Tungsten Carbide and Chrome Carbide etc. (Wear protection coatings).

## MISSION AND OBJECTIVES

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To supply and provide a consistently high service and quality to all our customers.

Stanfra Abrasive Solutions offers a sound and secure maintenance and repair service. This impacts positively on year end balance sheets since effective maintenance management limits costly downtime and increases productivity. By means of Stanfra Abrasive Solutions involvement in their plants and equipment, our clients have greatly increased the life of many components.



# RECONDITIONING OF THE FOLLOWING

- Reconditioning of Ball / Plug / Butterfly / Pocket / Trunnion Floating Ball / Segment valves.
- Mono, Orbit & Cemo Pump Spares.
- Thermal Spray and Polymer Coating Solutions.
- Hydraulic and Pneumatic Cylinder Reconditioning.
- Specialised Hardface welding / Cladding.

## SUPPLIERS OF

- Non-asbestos gaskets in sheets and ready cut form, Cork materials, rubber and pump packings.
- A wear resistant impellers for Warman, Envirotech and Denver pumps.

## ENGINEERING

- CNC Machining and Milling
- Horizontal shaft / Sleeve grinding

## INDUSTRIES WE SERVE

### **Paper and Pulp:**

**Control Valve Reconditioning,  
Segment Ball Valve Reconditioning  
Actuator & Actuator Barrel Reconditioning  
Knife Gate Valve Reconditioning  
Ball Valve Reconditioning**

### **Chemical and Petrochemical:**

**Centrifugal pumps (Impeller, Volute, Cover, Shaft sleeves)  
Valves - Ball / Plug / Pocket / Segment (ball, seat, body) with stem & seal kits  
Piston pumps (Piston)  
Mono Pumps (Rotor & Mainshafts)  
Reconditioning of Actuator and Actuator barrels**

### **Mining:**

**Mining dewatering pumps (Impellers, Wear rings, Shafts, Sleeves)  
Sludge pumps (Piston)  
Slurry valves (Ball, Butterfly, Gate, Dome)  
Extraction fans (Vane tips)  
Refrigeration plant (Impellers, Casings, Shafts)**

**STANFRA TRADING**  
Bethlehem

1 December 2014

Dear Mr. F. Marais,

The Ziroflex Coating principle was introduced to Mpact Piet Retief Mill in March 2010 by your company Stanfra Trading. It is with pleasure that I refer to the reports below as compiled by our Instrumentation Foreman, to display the excellent performance of the Ziroflex coatings as applied in our plant.

**First Report - March 2010 (by Werner Swanepoel)**

Parts treated by the Ziroflex Coating (Electrolitical Process) benefits from surface hardness of 70 Rockwell C on 20 micron, compared to 32 Rockwell C to 316 stainless steel.

I gave Stanfra Trading a DN150 stainless steel NAF valve for a trial. This specific valve was completely scrapped as the body was corroded through, the seat and ball segment was also corroded beyond economical repair.

Two weeks later Stanfra returned the repaired valve which I couldn't believe at first until I saw the marks I've made on the spare parts of the old valve before giving it to them. To tell the truth, the repaired valve was in a better condition than a new valve from the original supplier.

The following shut in March 2010 the valve was re-installed at the same position where it came out of (FC-1433), and usually only lasts three months due to small control opening and high noise before it is completely scrapped.

At the same time we installed a new DN150 NAF valve in the same application FC-1434. In July 2010, I removed the two valves for inspection on a shut down. The overhauled valve had absolutely no damage at all where the new valve from the supplier had to be replaced due to severe damage.

The repair cost on the old valve came to one third of the price of a new valve, which I think could raise a huge saving.

I would recommend this product to the Engineering Dept. for all moving parts on pumps, valves, impellers and even volute casings.

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Directors: A J Phillips (Chairman), B W Strong (Chief Executive Officer),  
N P Dongwana, N B Langa-Royds, E L Leong (Chief Financial Officer),  
T D A Ross, A M Thompson

### **Second Report – April 2012 (by Werner Swanepoel)**

During the PM4 shut on the 12<sup>th</sup> of April 2012 we did a routine inspection on the above mentioned valves as discussed in 'First Report' (FC-1433/4).

#### **Our findings were as follows:**

We replaced both valves as they have some wear damage on the body, seats and segments.

Although we changed the valves I am very happy with the outcome after 25 months of operation in the specific application. The Zirolflex Coating to me is a big success, not only on the life span but also on the savings with these two valves over the past two years.

#### **Savings:**

New Valve from supplier costs R29,500 each  
Replacement on a three monthly basis = R59,000 every 3 months  
Repair cost to these valves were = R15,800 in 2010  
If we had to replace every three months: 8 x R59,000 = R472,000

#### **Thus:**

$R472,000 - R15,800 = R456,200$  over 24 months.

This to me is a huge saving on only two applications. Just imagine the saving on 300 loops! Where we normally replaced these valves on a three monthly basis we may now successfully do routine inspection on these valve maybe on a 12 monthly basis.

I am sure that the other MPACT sites will also gain great benefit and savings from this product, not only on valves applications, but with any other wearing equipment.

### **Third Report – April 2014 (by William du Plessis)**

By the time I took over by Werner, all the above mentioned was already in place, I was fortunate to be involved in an exercise where we compared the prices of new valves to Stanfra Trading reconditioned valves and comparing the life span of both valves. The comparison was a no brainer and these reconditioned valves had become a standard applied to our department. All damaged valves are to be reconditioned by Stanfra Trading.

I have had other companies which promise and offer the same type of repairs but not come close to their work. Stanfra Trading has impressed us so that we have recommended it to our other MPACT sites so we can all benefit from it.



**Other Examples of Zirotflex use on Piet Retief site:**

- 1) Digester Sandtrap valve: The valve after repair is still class 4, the same as a new valve.

Stanfra did do some more critical valves like the sand trap valve where they manufactured a new ball and seats with pressure test certificate which is class 5 on metal to metal seating.

The repair cost on this valve from Stanfra was R185,000 against R460,000 for a new valve and R319,000 for the repairs to this valve from the original supplier.

- 2) Copeland Temperature Probes: We have applied the Zirotflex coating on the Copeland Reactor temperature probes which lasted about six months without the coating. After the Zirotflex application the probes lasts for more than one year (double the previous life span).
- 3) PM4 Wire and Fabric guide paddles: We applied the coating on these paddles in the beginning of 2011. Normally the fabrics cut through the paddle on a six to eight month cycle, depending on the application. We haven't replaced one paddle yet for wear since.
- 4) Valve Actuator Barrels: Stanfra Trading did repairs on damaged barrels with the Zirotflex coating. This repair and quality will be advised to any company at a fraction of the cost of a new barrel.
- 5) Knife and Through Gate valves: This is a new application that we are currently testing, and it seems the wear on the spade of the valve is well in hand. There is really a big difference over a certain time span so far on the waste plant applications. The repair on these valves also came in at about a third of the cost of a replacement valve.

Regards,

Johan de Waal  
Senior Engineer Electrical & Instrumentation  
Mpact Piet Retief Mill

06 April 2021

To Whom it may concern

*This letter serves as a motivation for the future possible supply & installations of locally manufactured Segmented ball valves by Stanfra Trading(Pty)Ltd - South Africa.*

*The area that was selected for a performance test valve was one of the most severe ones in the Paper and Pulp industry namely the Waste Plant where water, sand, staples and plastic materials are present with a mean temperature of between 45 and 55 degrees C. Operating pressures of between 4 and 6 bar. PH neutral with a consistency of 4,5%.*

*Past history :- Imported Segmented ball valves are currently being used since 1982.*

*We installed the first DN 100 Segmented Ball Test Valve from Stanfra Trading(Pty)Ltd in June 2020 allowing for a fair performance test of 3 months also inspecting the internals on a fixed frequency during maintenance down times of the plant.*

*The results were favourable to the engineering staff and No wear patterns were reported for action during this time. The test valve did Successfully Passed the test and only minor wear was observed after 4 months of installation. Current segmented ball valves used from other suppliers normally last between 2-3 months. This valve is currently still running after 9 months – March 2021.*

*This letter acts as a final recommendation and spells out the benefits for localisation :*

***100% locally manufactured in South Africa.***

***Price savings of up to 50% on the purchase of new units.***

***No risk of long delivery periods from Europe or Asia.***

***Locally reconditioned by Stanfra Trading(Pty)Ltd.***

***Adaptable to suit any flange dimension or styles.***

***All valves will be overlaid with Stanfra Trading's Zirolflex hard finish coating to combat excessive wear patterns.***

Werner Swanepoel  
Pulp Mill Superintendent

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14 June 2022

Kimberly-Clark Enstra Mill  
East-Geduld Road  
Enstra  
Springs  
1559

Dear Stanfra Trading Company Representative,

**Loan Valve performance Report – 4 inch Wafer valve**

This short document serves as a report on a loan valve with Zirotflex hard finish we received from Stanfra Trading (PTY)Ltd during the month of May 2021. The valve was installed for ten months. The effective run time of the plant was five months. Wear on the valve was measured during this five-month period.

The valve was installed in the recovered Fiber plant on a rejects line which is a harsh environment due to the solids staples and sand particles present in the reject pulp from a screening section of the plant. The valve was also subjected to a severe differential pressure across the valve due to the design of the plant causing a lot of cavitation across the valve. This adds to the quick wear on the valves.

The loan valve we received from Stanfra with Zirotflex hard coating for testing performed excellent in this application. The wear was less on this valve compared to similar valves we use in the plant. We will use and recommend this valve for similar applications. We already make extensively use of Stanfra Trading to repair and Zirotflex our valves in certain applications and are very happy with the results. I will recommend Stanfra for repairs on valves, pumps and equipment subjected to a lot of wear and the cost saving involved other than to replace with new units.



Without Zirotflex Coating  
– Aggressive Wear visible



With Zirotflex Coating –  
Minimum Wear visible



Kagiso Kotu  
Plant Manufacturing Engineer



13 June 2024

Procurement Specialists/Buyers/Commodity Specialists

**RE: Sole Source Letter**

To Whom It May Concern

This letter is to confirm that Zirotflex Coating is a sole source product, manufactured, sold and distributed exclusively by Stanfra Trading(Pty)Ltd t/a Stanfra Abrasive Solutions.

No division of Stanfra Trading(Pty)Ltd, nor any other company, makes a similar or competing product. There are no agents or dealers authorized to represent this product.

The following are the sole source reasons:

- The vendor is the manufacturer of this product and has no distributors.
- The vendor is the only reseller of the Zirotflex Coating in South Africa.
- Zirotflex Coating is a Registered Trade Mark and a secret process.

There is no other like product available for purchase that would serve the same purpose or function than Zirotflex Coating.

If you desire additional information, please do not hesitate to contact me at 0827268550 at any time or visit our website at [www.stanfra.co.za](http://www.stanfra.co.za).

Thank you for the interest in our product.

Sincerely,

Francois Marais  
Chief Executive Officer

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## Innovation & New Products Awards

STANFA TRADING

is awarded **WINNER** of the

Local Design and Manufacture  
**Industrial**



Organised by

**MONTGOMERY GROUP**  
SPECIALISED EXHIBITIONS

**19 July 2023**

Date

*Eric Druyterman*

CEO: SACCEC

*Andy Smith*

MD: Specialised Exhibitions



# 200mm Ball

Before and After



## S/Steel **Volute Casing**

Rebuild



# S/Steel Ball & Segment

Valves



# DN 200 Pocket Valve

Reconditioning and Pressure Test



## Backplates - Stuffing Boxes

Before and After





# SDA 300 / 400 Envirotech Pump

Rebuild



# Segment **Ball Valve**

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Before and After



# Reconditioned **Knife Gate**

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Valves



Pulp & Paper

# Drum Thickener

Reconditioned



## Reconditioned Valve Plugs

Before and After

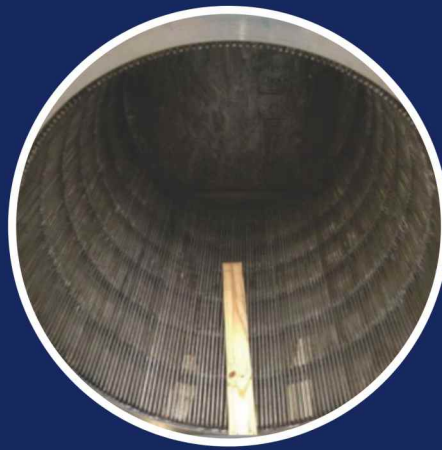




# Manufacturing of **Top Separator Basket**

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New



## Hydrapurge **Rotor Screens**

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New



# Reconditioning of **Hydrapurge Rotor**

63.25"



# Reconditioning of **Repulper Rotor**

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42"





# Warman Pump **Wear Plate**

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Rebuild



# Coatings

# **Epoxy Wear**

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Rebuild



# Contact

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## Gauteng



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Director



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# Contact

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**Francois Marais**

Director



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- ZIROFLEX - HIGH WEAR COATING
- ZIROFLEX - TR COATING - CORROSION
- RECONDITIONING OF PUMPS / VALVES
- GLAND PACKING & MECHANICAL SEALS
- ENGINEERING - TURNING & MILLING
- GENERAL CASTINGS & FORGINGS

